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Amendments to the Claims

This listing of the claims will replace all prior versions:

Listing of claims:

1. (currently amended) A method of making homogeneous alumoxane-LCT-epoxy polymers with a dielectric strength of at least 1.2 kV/mil and a thermal conductivity in the transverse direction of at least 0.50 W/mK and in the thickness direction of at least 0.99 W/mK in an environment of 25°C comprising:

mixing at least one LCT-epoxy resin with at least one boehmite material, under sufficient conditions to form a uniform dispersion and an essentially complete co-reactivity of said at least one boehmite material with said at least one LCT-epoxy resin, wherein a mixture is formed; and

curing said mixture to produce said homogeneous alumoxane-LCT-epoxy polymers;

wherein the amount of said at least one boehmite material to said at least one LCT-epoxy resin comprises a ratio of between 3:17 and 13:7 by weight.

2. (original) The method of claim 1, wherein said at least one boehmite material comprises carboxylate-alumoxane.

3. (original) The method of claim 2, wherein said carboxylate-alumoxane is 4-hydroxybenoate-alumoxane.

4. (original) The method of claim 1, wherein the alumoxane portions of said homogeneous alumoxane-LCT-epoxy polymers is 20-50% by weight.

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5. (original) The method of claim 1, wherein mixing said at least one LCT-epoxy resin with said at least one boehmite material comprises first pre-heating said at least one LCT-epoxy resin until said at least one LCT-epoxy resin is clear.

6. (original) The method of claim 1, wherein mixing said at least one LCT-epoxy resin and said at least one boehmite material further comprises warming until said mixture is clear.

7. (original) The method of claim 1, further comprising mixing at least one anhydriding agent with at least one of said at least one LCT-epoxy resin and said boehmite material, wherein said homogeneous alumoxane-LCT-epoxy polymers are a homogeneous alumoxane-LCT-epoxy-anhydride polymers.

8. (original) The method of claim 7, wherein said anhydriding agent is taken from the group consisting of 1-methylhexahydrophthalic anhydride and 1-methyltetrahydrophthalic anhydride.

9. (original) The method of claim 7, wherein said anhydriding agent is approximately 25-45% by weight of said homogeneous alumoxane-LCT-epoxy-anhydride polymers.

10. (original) The method of claim 1, wherein curing of said mixture comprises adding one of the group consisting of zinc naphthenate and chromium acetylacetonate.

11. (original) The method of claim 1, wherein said mixture is added to an electrical insulator as a coating before curing.

12. (currently amended) A method of making homogeneous alumoxane-LCT-epoxy polymers with a dielectric strength of at least 1.2 kV/mil and a thermal conductivity in the transverse direction of at least 0.50 W/mK and in the thickness direction of at least 0.99 W/mK in an environment of 25°C coated on at least one electrical insulator comprising the steps of:

mixing at least one LCT-epoxy resin with at least one boehmite material, wherein a mixture is formed;

warming until said mixture is clear and under sufficient conditions to form a uniform dispersion and an essentially complete co-reactivity of said at least one boehmite material with said at least one LCT-epoxy resin;

impregnating said mixture onto said electrical insulator; and

curing said mixture to produce said homogeneous alumoxane-LCT-epoxy polymers;

wherein the amount of said at least one boehmite material to said at least one LCT-epoxy resin comprises a ratio of between 3:17 and 13:7 by weight.

13. (original) The method of making homogeneous alumoxane-LCT-epoxy polymers coated on at least one electrical insulator as in claim 12, further comprising adding to said at least one LCT-epoxy resin at least one anhydriding agent prior to adding said boehmite material, wherein said homogeneous alumoxane-LCT-epoxy polymers are homogeneous alumoxane-LCT-epoxy-anhydride polymers.

14. (original) The method of making homogeneous alumoxane-LCT-epoxy polymers coated on at least one electrical insulator as in claim 12, wherein said electrical insulator is a mica/glass insulating tape.

15. (original) Homogeneous alumoxane-LCT-epoxy polymers comprising:

at least one alumoxane containing sub-structure;

at least one LCT-epoxy sub-structure;

thermal conductivity in the transverse direction of at least 0.50 W/mK and in the thickness direction of at least 0.99 W/mK in an environment of 25°C; and

dielectric strength of at least 1.2 kV/mil;

wherein said alumoxane substructure is organically bonded to said LCT-epoxy substructure;

wherein approximately 15-65 % by weight of said homogeneous alumoxane-LCT-epoxy polymers is said alumoxane sub-structure; and

wherein said homogeneous alumoxane-LCT-epoxy polymers are substantially free of particle wetting and micro-void formation.

16. (original) The homogeneous alumoxane-LCT-epoxy polymers of claim 15, wherein said alumoxane sub-structure comprises carboxylate-alumoxane.

17. (original) The homogeneous alumoxane-LCT-epoxy polymers of claim 16, wherein said carboxylate-alumoxane is 4-hydroxybenoate-alumoxane

18. (original) The homogeneous alumoxane-LCT-epoxy polymers of claim 15, wherein said homogeneous alumoxane-LCT-epoxy polymers contain at least one anhydride, and wherein said anhydride portion is approximately 25-45% by weight of said homogeneous alumoxane-LCT-epoxy polymers.

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19. (original) The homogeneous alumoxane-LCT-epoxy polymers of claim 15, wherein said homogeneous alumoxane-LCT-epoxy polymers are integrally formed with at least one electrical insulator.